

Patent Application of

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For

**TITLE: FASCIA BOARD HANGER**

**FEDERALLY SPONSORED RESEARCH**

Not Applicable

**SEQUENCE LISTING OR PROGRAM**

Not Applicable

**BACKGROUND—FIELD OF INVENTION**

This invention enables one person to hang fascia board of various sizes from 2"x6" to 2"x12" on plumb and square cuts, on every pitch from square (90°) to 12 in 12 (45°).

**BACKGROUND—DESCRIPTION OF PRIOR ART**

In many of the construction trades, the economies of modern construction necessitates that the number of craftsmen be limited to as few as possible due to the high labor cost. Labor cost is particularly high in the construction industry which, by necessity, is labor intensive because few construction practices can be reduced to automated techniques. The advances in modern construction practices have been for the most part, in improvements in the operation and efficiency of everyday tools that craftsmen use. For example, the development of automatic nailing guns, super adhesives, and tools to apply

them, and better materials and prefabricated substructures has greatly improved the efficiency and speed of building construction.

Much of the improvements in the past, however, have been directed toward improving the efficiency of the individual craftsman. There are, however, much needed improvements in overall construction practices which will lead to a reduction in the number of needed craftsmen, and thus, a corresponding reduction in construction cost. One such area is the hanging of fascia board to the ends of rafters during the construction of a home, which in the past has been a two or three-man job.

In conventional home construction, the rafters slant downward from the peak of the roof to the upper edge of the wall. Boards are laid on the upper surface of the rafters to form the roof. The rafters and roof extend beyond the wall and eave troughs at the edge of the roof receive the rain runoff from the roof. The eave troughs are mounted on fascia boards fastened to the ends of the rafters and lay parallel to the wall of the house.

Inventors have created several types of fascia board hangers to attach fascia board along the edges of rafters. U.S. patent 5,611,189 to Fleck (1997) is for an apparatus to support fascia board during installation along the rafters of a roof. However, this apparatus does not have a swivel bracket to adjust to all pitches of a roof structure. Thus, the device can only be used on a plumb cut rafter tail. The device is limited and can not be used on a square cut rafter tail.

U.S. patent 5,192,059 to Silver (1993) is a fascia board holder with a U-shaped channel that is rigidly mounted on quadrant which provides for no adjustment for varying sized fascia board. The device is only useable for one size rafter. The device does not show pitch marks to select angular position to lock the quadrant relative to the pitch of the roof.

U.S. patent 4,836,517 to Vossler (1989) shows a fascia board installing apparatus, but it is unclear how the fascia board installing apparatus would be removed after the fascia board is attached to rafter tail.

These patents, or known prior uses, teach and disclose various types of support devices, as well as methods of their construction; but none of them, whether taken individually or in combination disclose specific details of the combination of the inventions as to bear upon the claims of my fascia board hanger.

Temporary hangers may, of course, be used to hold up and align multiple fascia boards and numerous devices, such as those described in the Fleck and Vossler patents. None of the prior art devices, however, take into consideration that roof pitches vary from building to building, so they were not adjustable for different roof pitches.

Accordingly, several objects and advantages of my fascia board hanger are:

- (a) The rafter clamp saddle can be used on any sized rafter.
- (b) The swivel bracket may be adjusted and locked in position to accommodate varying roof pitches. Pitch increments are stamped on swivel bracket.
- (c) The fascia bucket may be adjusted and locked in various positions to receive and secure different-sized fascia board.

An additional advantage is my fascia board hanger is very light weight for carrying on tool belts. The hanger can be removed very simply after fascia board is attached. The hanger is made of very sturdy 3/16" aluminum. While reference to fabrication in aluminum has been made, other materials such as plastics or steel may well be equally employed.

## SUMMARY

In accordance with information presented, the fascia board hanger enables one person to use the rafter clamp to secure the hanger bracket on the rafter, to use the swivel bracket for securing the desired pitch, and the hanger bucket to support the fascia board. The hanger bucket also slides up and down for easy removal. It is a specific object of the fascia hanger to be easy to install, use, and remove.

The fascia board hanger is low in cost and at the same time, is sturdy in construction.

Another object of the fascia board hanger is one worker can install fascia board along the ends of rafters which reduces labor cost.

It is still another object of my hanger to be fully adjustable for the relative height of fascia to the top of the rafter during the installation process. After the fascia is installed, it provides yieldable means for removal.

## DRAWINGS

### Drawing Figures

In the drawings, closely related figures have the same number but different alphabetic suffixes.

Figures 1-2 show the assembly parts of the rafter clamp or saddle.

Figure 3 shows the rafter clamp or saddle assembled.

Figure 4 shows the swivel bracket for adjustment of pitch.

Figure 5 shows the fascia bucket for adjustment to size of fascia board to be used.

Figure 6 shows the swivel bracket and fascia bucket assembled.

Figure 7 is an elevation view showing embodiment of the fascia hanger of applicant's invention assembled.

Figure 8 is an elevation view showing embodiment of the fascia hanger of applicant's invention from the backside of the hanger, assembled.

Figure 9 is an elevation view showing one embodiment of fascia hanger of applicant's invention attached to a rafter.

### Reference Numerals In Drawings

1	sliding rafter tail clamp	11, 12	1/4" threaded stud
2	rafter tail clamp tightener	14, 15	1/4" groove
3	1/4" groove	16	hanger bucket
4	rafter tail clamp saddle	17, 18, 19, 20, 21, 22	wing nuts
5, 6, 7, 8	1/4" threaded studs	23	rafter tail
9	pitch marks	24	2"x6" fascia board
10	swivel bracket		

### DETAILED DESCRIPTION

#### Description—Figs. 1 -2-Preferred Embodiment

The fascia board hanger is now described with reference to the drawings. Figs. 1 and 2 illustrate one embodiment of applicant's fascia board hanger which is referenced to Figs. 9 and 4 attached to rafter tail.

Fig. 3, as in the case of a house rafter 23, extends beyond exterior wall at a conventional angle for a conventional length. The hanger is attached to rafter 23 with a saddle bracket. A holder portion 10 of the hanger swivels about pivot point 6 in accordance with the end cut of rafter.

**Figs. 4 and 5** illustrate two major components of applicant's fascia hanger. As shown in the drawing holder **10** is formed of adjusting channel **15** and bucket **16** which are attached to channel **15** with studs **11** and **12** which are attached to swivel bracket **10** and secured to respective saddle **1** and **4** by securing wing nuts **19** and **20** on swivel bracket **10**.

**Fig. 6** bracket **10** is attached to channel **15** by wing nuts **19** and **20** internally threaded to receive threaded studs **11** and **12** attached to swivel bracket **10** through channel **15** and secured by wing nuts **19** and **20**. Slot channel **15** in fascia bucket **16** is marked with a graduated scale in increments of inches and fractions of inches as shown in **Fig. 7** to permit adjustment for desired fascia board width.

The graduations permit wing nuts **19** and **20** to be repeatedly set to different positions accurately. Where two or more fascia board hangers are used to hang fascia board, the graduated scale allows the catches in each hanger to be set to the same relative position with respect to channel **15**.

**Fig. 7** illustrates still further embodiment of applicant's fascia hanger. In this embodiment, fascia bucket **16** is attached to swivel bracket **10** with threaded studs **11** and **12** secured by wing nuts **19** and **20**. The vertical position of fascia bucket **16** can be adjusted by loosening and tightening wing nuts **19** and **20** once desired increments on fascia bucket **16** are located; then the bucket **16** can be secured.

**Fig. 8** illustrates another embodiment of the present invention. This embodiment shows various components which are used to form clinching wing nuts **19** and **20**. The components include threaded studs **11**, **12**, **7**, **8**, **5**, **6** wing nuts **19**, **20**, **17**, **18**. Sliding rafter tail clamp **1** sliding rafter tail clamp tightener **2**,  $\frac{1}{4}$ " channel groove **3** rafter tail clamp saddle **4** swivel bracket  $\frac{1}{4}$ " groove **15** hanger bracket bucket **16**.

**Fig. 9** is an elevation view showing one embodiment of fascia hanger of applicant's invention attached to a rafter tail.

#### **Operation—Figs. 1, 4, 6**

**Fig 1** illustrates how the rafter tail clamp saddle straddles the rafter tail and supports the rest of the hanger bucket **16**. The saddle uses two quarter inch bolts with locking nuts. It is used for pivoting and securing the swivel bracket **10** after the pitch is selected. The rafter clamp also has a pitch mark on it. The pitch mark **9** is essential to establish the correct setting of the swivel bracket to match the pitch, or degree, of the rafter cut being used. Clamp also extends from 1 ½" to 3 ½" with a sliding bracket secured with two locking wing nuts.

**Fig. 4** illustrates the swivel bracket which attaches to the rafter clamp and rotates from square (90°) to 12 in 12 (45°). The bracket has pitch markings stamped on it which range from square through 12 in 12. When the pitch mark on the swivel bracket is lined up with the pitch mark on the rafter clamp, it can be secured by tightening the locking wing nuts **17** and **18**, once the desired pitch is determined. The swivel bracket attachment also supports the hanger bucket **16**. The swivel bracket has two quarter inch bolts with wing nuts which can be loosened to allow the hanger to slide up and down to the desired width of fascia board. The bucket is secured with the two locking wing nuts.

**Fig 6** is the hanger bucket which is attached to the swivel bracket. The hanger bucket **16** supports the fascia board and slides up and down on the back side of the swivel bracket. The swivel bracket is marked from 5 ½ (2"x6"); 7 ½ (2"x8"); 9 ½ (2"x10"); 11 ½ (2" x12") markings for square or 90° cuts only. Hanger bucket is layed out in ¼" increments. (It is not necessary to lay it out in 1/8ths or less.) The

fascia board will drop from  $\frac{1}{4}$  to 1" on a plumb-cut to keep the fascia board on the same plane as the rafter. The installer judges how far the fascia board will drop on a plumb-cut. The drop, or plane, of the fascia board depends on the pitch of the roof, or rafter cut, being used. Once plane is determined, the installer tightens the two locking wing nuts on the back of the swivel bracket to secure the hanger in place. Hanger bucket also widens at the bottom to 2" for balancing fascia board, which is critical when using only one fascia board hanger. This bracket enables installers to hang fascia board alone using only one hanger. Installer may use two hangers when heavier material is being used.

### **Conclusion, Ramifications, and Scope**

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications, and equivalents which may be resorted to, will be understood to fall within the scope of the invention. The primary advantage of my hanger is to enable installers to hang fascia board from sizes 2x6 to 2x12 on plumb and square cuts, on every pitch from square (90°) to 12 in 12 (45°) alone.